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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/937,460	12/28/2001	Pieter Tjerk Koopman	3135-011614	9480

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EXAMINER	
AN, SHAWN S	

ART UNIT	PAPER NUMBER
2613	

DATE MAILED: 01/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/937,460	KOOPMAN, PIETER TJERK	
	Examiner	Art Unit	
	Shawn S An	2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 August 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *22-42* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *22-42* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. As per Applicant's instruction as filed on 8/5/04, claims 22 and 36 have been amended.

Response to Remarks

2. Applicants' arguments with respect to claims 22-42 as amended have been carefully considered but are moot in view of the new ground(s) of rejection incorporating the prior art references cited in the last office action.

In response to applicant's argument that Bacus and Madden references are nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Applicant's invention relates to a device and a method for recording an image of an object for the analysis of DNA or RNA structures. Bacus' reference relates to a device and a method for recording an image of an object for the analysis of cell structures. Further, Bacus teaches property measure of cells in terms of such features as DNA content ..., and the ratio of the size of nucleus to that of the cytoplasm (col. 1, lines 50-59). Furthermore, Bacus's reference is quite similar in the field of technology (biology, medical image analysis) as Applicant's invention. Therefore, the Examiner considers Bacus' reference, the analogous prior art reference.

As per Applicant's argument regarding claims 35 and 41, Bacus discloses at least one mirror (28) being disposed between the object and the camera in addition to the beam splitter mirror (20) (Fig. 1). Furthermore, Bacus (5,134,662) teaches rotatable beam splitter mirror (Fig. 3, 156). Therefore, it would have been obvious to utilize the rotatable mirror as Bacus' beam splitter mirror so as to rotate the mirror so as to correct the image alignment and/or image path.

Moreover, in response to Applicant's arguments, the recitation "comprising DNA or RNA structures" has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claim 22, 27, 32, and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bacus (4,175,860).

Regarding claims 22, 27, and 36, Bacus discloses a device for selecting and recording an image which forms a part of an irradiated or emissive object, comprising:

an object holder (Fig. 1, 10) for positioning the object;

a mirror (28) for reflecting an image of the object; and

a camera (32) for selecting a part of the image from the reflected image of the object.

Bacus's does not particularly disclose displaceable camera. However, the Examiner takes official notice that a displaceable (tracking, horizontal/vertical scanning/panning, rotating) camera is conventionally well known in the art.

Therefore, it would have been obvious to a person of skill in the art employing a device for selecting and recording an image as taught by Bacus to incorporate the well known displaceable camera so that the Bacus's camera can freely move/rotate (displacement) so as to better select a part of the image from the reflected image of the object.

Furthermore, Bacus does not specifically disclose recording an image forming a part of an irradiated or emissive comprising DNA or RNA structures.

However, Bacus teaches property measure of cells in terms of such features as DNA content ..., and the ratio of the size of nucleus to that of the cytoplasm (col. 1, lines 50-59).

Moreover, the recitation "comprising DNA or RNA structures" has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

Therefore, it would have been obvious to a person of skill in the art employing a device for selecting and recording an image as taught by Bacus to easily substitute cell structure with the DNA structure, or additionally analyze the DNA structure for an image analysis.

Regarding claim 32, it is considered quite obvious for Bacus's device to be provided with a housing in order to protect the device from dirt, dust, irradiation, liquid pour, vandalism, etc.

Furthermore, the Examiner takes official notice that a housing such as Bacus's device, or any other electrical device usually is completely sealed (radiation sealed as well) for the purpose of protection and prevention so at least the external irradiation by a radiation source does not interfere with the internal radiation source in the device.

5. Claims (23, 30), and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bacus (4,175,860) as applied to claims 22 and 36 above, respectively, and further in view of Madden et al (6,297,825 B1).

Regarding claims 23, 30, and 37, Bacus does not specifically disclose the camera being rotatable around two rotation axis substantially perpendicular to each other.

However, it is well known in the image processing art for a camera to rotate in a desired angle for an effective way of taking/capturing/sensing an image.

Furthermore, Madden et al teaches an example of camera rotation (col. 10, lines 1-4).

Moreover, a drive means for displacing the camera is considered an inherent feature, because the camera can't displace/move by itself.

Therefore, it would have been obvious to a person of skill in the art employing a device for selecting and recording an image as taught by Bacus to incorporate the well known concept of camera rotation as above as taught by Maden et al so that the Bacus's camera can be rotatable around two rotation axis substantially perpendicular to each other for an effective way of taking/capturing/sensing an image.

6. Claims (24-26, 28-29, 31, 33-35), and 38-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bacus (4,175,860) as applied to claims 22 and 36 above, respectively, and further in view of Bacus et al (5,134,662).

Regarding claims 26 and 40, Bacus does not specifically disclose a radiation source for irradiating the object positioned by the object holder.

However, Bacus et al teaches the radiation source (Fig. 2, 19) for irradiating the object positioned by the object holder (51).

Therefore, it would have been obvious to a person of skill in the art employing a device for selecting and recording an image as taught by Bacus to incorporate the well known concept of the radiation source for irradiating the object as above as taught by Bacus et al as an effective tool for sensing an image.

Regarding claims 24 and 38, Bacus does not specifically disclose the mirror being rotatable around a single rotation axis.

However, Bacus et al teaches the mirror (Fig. 3, 160) being rotatable around a single rotation axis for the purpose of reflecting a chosen part of the image of the object to a viewing area (col. 27, lines 48-50).

Therefore, it would have been obvious to a person of skill in the art employing a device for selecting and recording an image as taught by Bacus to incorporate the well known concept of mirror rotation as above as taught by Bacus et al so that the Bacus's mirror can be rotatable around a single rotation axis for the purpose of reflecting a chosen part of the image of the object to a viewing are for an effective way of taking/capturing/sensing an image.

Regarding claims 25, 33, and 39, Bacus discloses the camera being displaceable in the viewing area substantially parallel to the rotation axis of the rotatable mirror having an elongated form (Fig. 1).

Regarding claims 28 and 42, Bacus discloses the radiation source being disposed on the side of the object remote from the mirror (Fig. 2, 19).

Regarding claim 29, a drive means for rotating the mirror is considered an inherent feature, because the mirror can't rotate by itself.

Regarding claim 31, a linear guide means for guiding the camera is considered an obvious feature to hold the camera in place.

Regarding claim 34, it would have been obvious to make the rotatable mirror, rotatable axis, and a drive means for rotation to be integral with the camera so that the object image is totally aligned with the rotatable mirror, rotatable axis, and the camera.

Regarding claims 35 and 41, Bacus discloses at least one mirror (28) being disposed between the object and the camera in addition to the beam splitter mirror (20) (Fig. 1). Furthermore, Bacus (5,134,662) teaches rotatable beam splitter mirror (Fig. 3, 156). Therefore, it would have been obvious to utilize the rotatable mirror as Bacus' beam splitter mirror so as to rotate the mirror so as to correct the image alignment and/or image path.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to ***Shawn S An*** whose telephone number is 703-305-0099. The Examiner can normally be reached on Flex hours (10).

9. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

10. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SSA
Primary Patent Examiner
1/9/05